**S3 Table. Results of the calibration model performance for each species and the variables measured in incubated earthworm casts (all dates) as assessed by the coefficient of determination of calibration (R2c), the root mean square error of cross validation (RMSECV), the number of factors of the PLS model.** Analysis was performed with NIR spectra from 1,100 to 2,500 nm after Savitzky-Golay 2nd derivative transformation with 21 smoothing points (10, 10).

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Species** | **Variables** | **R2c** | **RMSEC** | **SEC** | **R2cval** | **RMSECV** | **SECV** | **Factors** |
| ***A. rosea***  | C | 0.998 | 0.03 | 0.03 | 0.426 | 0.67 | 0.69 | 6 |
|  | N | 0.554 | 0.07 | 0.07 | 0.229 | 0.10 | 0.10 | 1 |
|  | C:N | 0.516 | 0.07 | 0.07 | 0.083 | 0.10 | 0.11 | 1 |
|  | $$NH\_{4}^{+}$$ | 0.990 | 0.22 | 0.23 | 0.615 | 1.50 | 1.54 | 4 |
|  | $$NO\_{3}^{-}$$ | 0.765 | 5.01 | 5.16 | 0.101 | 10.4 | 10.68 | 2 |
| ***L. friendi*** | C | 0.652 | 0.55 | 0.56 | 0.059 | 0.96 | 0.99 | 1 |
|  | N | 0.601 | 0.05 | 0.05 | NA | 0.09 | 0.09 | 1 |
|  | C:N | 0.999 | 0.002 | 0.002 | 0.373 | 0.05 | 0.05 | 6 |
|  | $$NH\_{4}^{+}$$ | 0.972 | 0.30 | 0.31 | 0.289 | 1.61 | 1.66 | 3 |
|  | $$NO\_{3}^{-}$$ | 0.643 | 4.87 | 5.03 | NA | 8.85 | 9.14 | 1 |
| ***P. pyrenaicus*** | C | 0.998 | 0.03 | 0.03 | 0.449 | 0.54 | 0.56 | 6 |
|  | N | 0.996 | 0.004 | 0.004 | 0.371 | 0.06 | 0.06 | 6 |
|  | C:N | 0.890 | 0.02 | 0.03 | 0.203 | 0.07 | 0.07 | 3 |
|  | $$NH\_{4}^{+}$$ | 0.932 | 0.71 | 0.73 | 0.293 | 2.43 | 2.49 | 3 |
|  | $$NO\_{3}^{-}$$ | 0.976 | 1.54 | 1.59 | 0.268 | 9.05 | 9.31 | 4 |